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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,114	04/25/2001	Tsutomu Yamada	66382-21	6148
25269	7590	12/04/2003	EXAMINER ERDEM, FAZLI	
DYKEMA GOSSETT PLLC FRANKLIN SQUARE, THIRD FLOOR WEST 1300 I STREET, NW WASHINGTON, DC 20005			ART UNIT 2826	
			PAPER NUMBER	

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/841,114

Applicant(s)

YAMADA, TSUTOMU

Examiner

Fazli Erdem

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 6, 7 and 11-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 6, 7 and 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3, 6, 7, 11-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama et al. (2001/0006408) in view of Funahata et al. (6,476,890) further in view of Yoon et al. (6,593,982) further in view of Takatori et al. (6,504,592) further in view of Wong (6,441,878) further in view of Taniguchi (6,424,398).

Regarding Claims 1, 3, 6, 7, 11-15, Matsuyama et al. disclose an orientation division type liquid crystal display, fabrication method thereof and image display method where in an orientation division type liquid crystal display device for widen a viewing angle of a display pixel of an active matrix type liquid crystal color display device having a COT structure, pixel color layers, as color filter and pixel electrodes are formed on a substrate on the side of the pixel electrodes and slopes are provided along four side peripheries of each pixel electrode. Matsuyama et al. fail to disclose the required depression structure, color filter structure/electrode depression structure, spacer structure, anisotropy/dielectric constant structure, and first/second protrusion configuration structure. However, Funahata et al. disclose a reflective color liquid crystal display apparatus with colored polymer layer where the required depression structure is disclosed. Furthermore, Yoon et al. disclose a liquid crystal display with color filter having depressed portion for wide viewing angle where the required color filter/electrode depression

structure is disclosed. Takatori et al. disclose a liquid crystal display and method of manufacturing the same and method of driving the same where the required spacer structure is disclosed. Wong discloses a liquid crystal display including pixel electrodes with split-positioned along first direction and longitudinal axis of liquid crystal molecules positioned along second direction where the required anisotropy/dielectric constant structure is disclosed. Finally, Taniguchi discloses a liquid crystal display where the required first/second protrusion configuration is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required depression structure, color filter/electrode depression structure, spacer structure, anisotropy/dielectric constant structure, and first/second protrusion configuration in Matsuyama et al. as taught by Funahata et al., Yoon et al., Takatori et al., Wong, and Taniguchi, in order to have a liquid crystal display device with better performance.

2. Claims 16-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama et al. (2001/0006408) in view of Yoon et al. (2001/0007487) further in view of Yoon et al. (6,593,982) further in view of Takatori et al. (6,504,592) further in view of Tsuda et al. (6,525,797) further in view of Taniguchi (6,424,398)

Regarding Claims 16-19, Matsuyama et al. disclose an orientation division type liquid crystal display, fabrication method thereof and image display method where in an orientation division type liquid crystal display device for widen a viewing angle of a display pixel of an active matrix type liquid crystal color display device having a COT structure, pixel color layers, as color filter and pixel electrodes are formed on a substrate on the side of the pixel electrodes

and slopes are provided along four side peripheries of each pixel electrode. Matsuyama et al. fail to disclose the required depression structure, color filter/electrode depression structure, spacer structure, anisotropy/dielectric constant structure, and first/second protrusion configuration. However, Yoon et al. disclose a liquid crystal display having wide viewing angle where the required depression structure is disclosed. Furthermore, Yoon et al. disclose a liquid crystal display with color filter having depressed portion for wide viewing angle where the required color filter/electrode depression structure is disclosed. Takatori et al. disclose a liquid crystal display and method of manufacturing the same and method of driving the same where the required spacer structure is disclosed. Tsuda et al. disclose a liquid crystal display device and its manufacturing method in which the alignment films having different characteristics where the required anisotropy/dielectric constant structure is disclosed. Finally, Taniguchi discloses a liquid crystal display where the required first/second protrusion configuration is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required depression structure, color filter/electrode depression, spacer structure, anisotropy/dielectric constant structure, and first/second protrusion configuration in Matsuyama et al. as taught by Yoon et al., Yoon et al.(6,593,982), Takatori et al., Tsuda et al, and Taniguchi et al. in order to make a liquid crystal display device with better performance.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fazli Erdem whose telephone number is (703) 305-3868. The examiner can normally be reached on M - F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

FE  
November 30, 2003

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke extending to the left.